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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/987,338 | LYNCH, WILLIAM CHARLES | |
| | Examiner THUAN T. NGUYEN | Art Unit 2685 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS**. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to _____.
2. The allowed claim(s) is/are 1-185.
3. The drawings filed on 14 November 2001 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-185 are allowed.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The prior art of record issued to Leuca, Davis and Lux fails to either alone or combine to teach or suggest a space-based server network architecture which permits on demand transfer of data between a client satellite in an orbit about earth and an earth station irrespective of the location of the client satellite relative to the earth station, the space-based server architecture comprising:

- a) a plurality of client satellites located in one or more earth orbits;
- b) a plurality of server satellites located spaced apart in at least one earth orbit and being sufficient in number to provide substantially total world-wide communications coverage to and connectivity with designated and authorized earth stations and said plurality of client satellites, said at least one earth orbit of said server satellites being higher than said one or more earth orbits of said client satellites, each of said server satellites including:
 - i) communications downlink means for providing intercommunication with designated and authorized earth stations within its field of view;
 - ii) communications crosslink means for providing intercommunications with other server satellites within its field of view;
 - iii) communications link means for providing intercommunication with a client satellite within its field of view;

iv) a processor configured to determine data routing and management information including information related to one or more server satellites, if any, to be used for data transmissions between a client satellite and an earth station and generating pre-processed data, processed data and unprocessed data and then forwarding them to one of the designated and authorized earth stations; and

v) a memory configured to store the pre-processed data, the processed data and the unprocessed data; and

c) wherein when control data for a particular client satellite originating from a corresponding earth station is passed directly from the corresponding earth station to an accessible server satellite within its terrestrial communications link field of view, the processor associated with said accessible server satellite determines the appropriate data routing and management information and, based on such data routing and management information, either passes said control data either directly to said particular client satellite over said communications link means if within its communications field of view, or transmits said control data over said communications crosslink means to a server satellite having direct communications access to either said particular client satellite or another server satellite that is capable of communicating with particular client satellite; and

d) wherein when the particular client satellite transmits its mission data to a corresponding earth station, irrespective of its location on earth, over said communications link means to the accessible server satellite within its communication field of view, using the mentioned processor which either passes said mission data either directly to the designated earth station over said communications downlink means if within its communications field of view, or

transmits said mission data over said communications crosslink means to a server satellite having communications downlink access to either the corresponding earth station or another server satellites that is capable of communicating with said corresponding earth station as cited in claim 1 and similarly in claims 10, 19, 33, 49, 57, 67, 96 and 109.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tony T. Nguyen
Art Unit 2685
October 27, 2004



EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600